AMENDMENT TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) A contactless system for measuring centricity and diameter, said system comprising:

i) an optical measuring device for determining ~~the~~ an external diameter and ~~the~~ a position of a cable in an optical measuring plane, the optical measuring plane being ~~that is arranged~~ perpendicular to and transverse to ~~the~~ a central axis Z of a measuring device, wherein the cable comprises a conductor with insulating jacket and is pulled in the direction of the central axis Z through the measuring device;

ii) an inductive measuring coil arrangement for determining the position of the conductor in an inductive measuring plane, ~~which is also~~ the inductive measuring plane being ~~arranged~~ perpendicular to and transverse to the central axis Z of the measuring device; and

iii) means for computing the centricity of the conductor inside the jacket based on ~~which correlate~~ the position of the cable, determined with the optical measuring device, and the position of the conductor, determined with the inductive measuring coil arrangement, ~~and that from the obtained values, the centricity of the conductor inside the jacket is computed,~~

wherein ~~the~~ measuring coils of the inductive measuring coil arrangement are arranged in pairs or cut in half with respect to the optical measuring plane, said measuring coils ~~and determine~~ determining ~~the~~ a field intensity in front of the optical measuring plane and ~~the~~ a field intensity behind the optical measuring plane, ~~and that~~ said inductive measuring coil arrangement correlating the field intensities in front of and behind the optical measuring plane ~~determined in the process are correlated such that the~~ to determine a field intensity in an active inductive measuring plane ~~is obtained~~, ~~which coincides~~ said active inductive measuring plane coinciding

with the optical measuring plane ~~by forming~~ to form a joint, active measuring plane M.

2. (Currently amended) The system according to claim 1, wherein ~~one~~ a first optical measurement ~~takes place~~ is taken in a direction X, which is perpendicular to the central axis Z, and a second optical measurement is taken in a direction Y, which ~~that~~ is ~~also~~ perpendicular to the central axis Z, ~~and that~~ the X- and Y-directions ~~enclose~~ enclosing an angle, in particular a 90° angle.

3. (Currently amended) The system according to claim 2, wherein the optical measuring device is provided with ~~two~~ a first light source and a second light ~~sources~~ source, wherein ~~of which one~~ the first light source emits light in the X-direction and the ~~other one~~ second light source emits light in the Y-direction onto the cable, and ~~that~~ the optical measuring device is respectively provided with a first sensor on the opposite side of the cable in the X-direction from said first light source, and a second sensor on the opposite side of the cable in the Y-direction from said second light source, said first sensor and said second sensor being adapted to ~~with~~ respectively ~~one light sensor which detects the~~ detect light emitted by the ~~opposite arranged~~ first and second light ~~source~~ sources.

4. (Currently amended) The system according to claim 1, wherein all of said measuring coils of the inductive measuring coil arrangement have the same form and effective surface.

5. (Currently amended) The system according to claim 1, further comprising a device for inducing a high-frequency alternating current in the conductor ~~is provided, and that the~~ effective surfaces of the measuring coils ~~extends~~ extending in a X-plane or a Y-plane, ~~that~~ the X-plane and the Y-plane ~~intersect and enclose~~ intersecting and enclosing an angle, especially a 90° angle, ~~and are~~ the X-plane and the Y-plane being positioned perpendicular to the joint, active measuring plane M, ~~and that~~ the central axis Z ~~extends~~ extending along ~~the~~ an intersecting line for the X-plane and the Y-plane.

6. (Currently amended) The system according to claim 5, wherein the inductive measuring coil arrangement comprises four measuring coil pairs, ~~that~~ four separate measuring coils ~~are~~ being positioned in the X-plane and ~~that~~ four separate measuring coils ~~are~~ being arranged in the Y-plane, ~~that~~ a ~~separate~~ first measuring coil of one of the ~~a~~ four measuring coil ~~pair~~ pairs ~~is~~ being positioned in front of the joint, active measuring plane M and ~~that the other separate~~ a second measuring coil of this measuring coil pair ~~is~~ being arranged behind the joint, active measuring plane M, ~~and that~~ the ~~separate~~ first and second measuring coils ~~are~~ being arranged symmetrical to the joint, active measuring plane M and to the central axis Z.

7. (Currently amended) The system according to claim 5, wherein the inductive measuring coil arrangement comprises four measuring coils in the form of differential coils and that the differential coils form measuring coil pairs, for which ~~the~~ an effective surface of each pair is cut in half with respect to the central axis Z.

8. (Previously presented) The system according to claim 7, wherein the differential coils are provided with winding sections extending on both sides of the central axis Z and parallel thereto, which are connected via connecting bends that extend concentric to the central axis Z and that the parallel winding sections extend either in the Y-plane or the X-plane.

9. (Currently amended) The system according to claim 5, wherein the inductive measuring coil arrangement has four measuring coils which are cut in half by the joint, active measuring plane M, such that two are located in the X-plane and two are located in the Y-plane.

10. (Currently amended) The system according to claim 5, wherein a first optical measurement takes place in a direction X, which is perpendicular to the central axis Z, and a second optical measurement takes place in a direction Y that is also perpendicular to the central axis Z, the X- and Y-directions enclose an angle, in particular a 90° angle, and wherein the X-direction for the first optical measurement is located in the X-plane for the inductive measurement and ~~that~~ the Y-direction for the second optical measurement is located in the Y-plane for the inductive measurement.

11. (Currently amended) A method for ~~the~~ contactless determination of an external diameter of a cable, the cable comprising a conductor with insulating jacket, and a centricity of the conductor inside the jacket, wherein the cable is pulled through a measuring device along a central axis Z, comprising:

i) optically determining ~~the~~ a position and an external diameter of the cable in an optical measuring plane, ~~which is~~ the optical measuring plane being ~~arranged~~ perpendicular and transverse to the central axis Z of the measuring device;

ii) inductively determining ~~the~~ a position of the conductor in an inductive measuring plane, the inductive measuring plane being ~~which is also arranged~~ perpendicular and transverse to the central axis Z of the measuring device, and

iii) ~~correlating~~ computing the centricity of the conductor inside the jacket based on the optically measured position of the cable and the inductively determined position of the conductor ~~and that from this correlation the centricity of the conductor inside the jacket is computed~~,

wherein ~~the~~ field intensities in front of the optical measuring plane ~~as well as the~~ and field intensities behind the optical measuring plane are determined and ~~that the field intensities determined in this way are~~ correlated [[,]] ~~such that the field intensity~~ to determine ~~in~~ an active inductive measuring plane ~~results~~, said active inductive measuring plane ~~which coincides~~ coinciding with the optical measuring plane ~~by forming~~ to form a joint active measuring plane M.

12. (Currently amended) The method according to claim 11, wherein the optical measurement and the inductive measurement take place simultaneously and ~~that the measured data~~ are processed in real time.

13. (New) A contactless system for measuring centricity and diameter of a cable including a conductor within an insulating jacket, the cable being received along a central axis, said system comprising:

an optical measuring device adapted to determine a position of the cable in a measuring plane, the measuring plane being perpendicular and transverse to the central axis;

an inductive measuring coil arrangement adapted to determine a position of the conductor in the measuring plane, said inductive measuring coil arrangement having a plurality of measuring coils arranged in pairs or cut in half with respect to the measuring plane, said inductive measuring coil arrangement being adapted to determine the position of the conductor based on a first field intensity in front of the measuring plane and a second field intensity behind the measuring plane; and

a device adapted to compute a centricity of the conductor within the jacket based on the position of the cable and the position of the conductor.